

Human impacts on the Critical Zone are large, and vice versa



The Critical Zone and human society are closely intertwined, impacting each other in myriad ways. Two particularly important issues are

- **climate change**
- **land use**

There are many other issues including impacts on:

- soil quality
- stream flow and runoff
- contaminant transport
- the carbon cycle

Humans clearly affect the Critical Zone. Some examples:

- 30-50% of global land surface and 50% of freshwater has been used by humans.
  - Croplands and pastures now rival forest cover as the major biome on Earth.
  - Soil loss on U.S. croplands and pastures exceeds 1cm/yr at present.
  - Contaminants have been documented in 80% of representative streams in the U.S.
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